An Action Research Project on the Efficacy of Homework in the 8th Grade

**Introduction**

My primary question when I began this action research study was whether homework aided in student learning. The most straightforward answer I can give is that if homework is designed well, with express purpose, utilizes higher level thinking, is short enough to be time appropriate, and is assigned to a student with a healthy motivation and measure of interest in the material, it does aid in student learning.

But like the best questions, I am left with not an answer, but even more questions. Are the positives I observed worth the negatives? Does homework aid in student learning on average? What unintended consequences that I never considered before this research are resultant of assigning homework?

I don’t have a definite answer after six weeks of official research and a years’ worth of experiences to reflect on. I do know that assigning work outside the classroom will be an aspect of being an educator that I will draw my attention and something that I will continue to evolve on.

Trends in Attitudes towards Education

Before we start looking at what the experts or this study has to say about homework, I think it is important to get a dose of perspective to try and get us on the level. Anybody that’s spent any time in education probably has pretty strong feelings about homework. It’s important to know that American society has not always felt one way about homework’s place in education.

Attitude towards homework in America have been cyclical. Before the 20th century, homework was believed to be in important tool to discipline children's minds. By the 1940s, reactions against homework began. The reason for this was that problem-solving abilities became more important as opposed to drill instruction. Also, the life adjustment movement viewed homestudy as an intrusion on other at-home activities (Cooper, et al. 2006).

The trend towards less homework again changed course in the 50s after the Russians beat America into space. Homework with us changed to be favorable again as a means to accelerate the pace of knowledge acquisition. By the mid-60s the cycle reversed itself again. Critics highlighted the excessive pressure on students. Again in the 80s, the use on homework shift yet again towards a more positive attitude. Declining test scores on standardized tests and a burgeoning global marketplace that that people, rightly so, were concerned would lead to increased competition and loss of jobs to foreign markets. And once again, the tides changed and around the turn of the century parents expressed concern about the stresses of homework on their children (Cooper, et al. 2006). Voices, perhaps the most famous of which is Alfie Kohn, have called for a complete overhaul or to be simply done away with.

Literature Review

In 1989, Harris Cooper, a prominent educational psychologist, conducted a review of nearly 120 empirical studies of homework's effects and what makes successful homework using meta-analysis, which is a statistical technique for combining a multitude of studies into a singular one. In 20 studies between 1962 and 1986, 14 of these studies showed homework as favorable and six as not. According to these studies, the average high school student in a class doing homework outperformed 69% of the students in a no homework class as measured by standardized tests or grades. In junior high school the effect homework had was half that of high school. In elementary school, homework had no association with achievement gains (Cooper, 1989).

In other studies that Cooper found, many of which used statewide surveys or national assessments, 43/50 indicated that students who did more homework had better achievement outcomes, while only seven indicated negative outcomes. However, the positive homework correlation only existed at the upper levels with high school students who did homework achieving 25% higher, middle school grades achieving only 7% higher, and no difference in achievement for elementary school. (Cooper, et al., 2006).

Critics, such as Alfie Kohn, point out that measuring student learning and student achievement by grades and standardized tests simply serves to reinforce the methods by which one gets high grades and high standardized test scores, only assessing the students’ ability to test well or navigate a course to a high grade. It is not testing what the student has learned or what the student can really do (Kohn, 2006). Although Kohn calls Cooper’s research, “the most exhaustive review of the research to date (p. 27. 2006),” he interprets the data differently and does not find sufficient causal connections with so many variables unaccounted for.

Kohn (2006) references multiple studies done on homework from the 60’s through the 80’s that show either show spurious or conflicting evidence regarding whether homework produces better academic achievement. In one study, a researcher looked at the evidence and concluded there was a strong connection between achievement and homework, while another researcher looked at the same results and drew a wholly different conclusion that there wasn’t any reason that he could see for a connection. In every case, the data from these studies can be interpreted in an alternate way, and the real meaning is always subjective (Kohn, 2006).

However, most researchers align with Cooper’s interpretation of the data Kohn finds ambiguous and some even consider Cooper’s conclusions too conservative regarding homework’s importance. Marzano & Pickering note that Cooper and colleagues' (2006) comparison of homework with no homework indicates that the average student in a class in which appropriate homework was assigned would score 23 percentile points higher on tests of the knowledge addressed in that class than the average student in a class in which homework was not assigned (Marzano & Pickering, 2006). The chart below lays out data from major studies on the effectiveness of homework over the last 30 years.

(Fig 5. Synthesis Studies on Homework from Zimmerman, B. (2011). Developoing Self Regulation Skills: The Important Role of Homework. *Journal of Advanced Academics 22(2)* , 194-218.

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| Synthesis Study | Focus | Number of Effect Sizes | Average | Percentile Gains |
| Graue, Weinstein, &Walberg, 19831 | General effects of homework | 29 | .49 | 19 |
| Bloom, 1984 | General effects of homework | — | .30 | 12 |
| Paschal, Weinstein, & Walberg, 19842 | Homework versus no homework | 47 | .28 | 11 |
| Cooper, 1989a | Homework versus no homework | 20 | .21 | 8 |
| Hattie, 1992; Fraser, Walberg, Welch, & Hattie, 1987 | General effects of homework | 110 | .43 | 17 |
| Walberg, 1999 | With teacher comments | 2 | .88 | 31 |
| Graded | 5 | .78 | 28 |
| Cooper, Robinson, & Patall, 2006 | Homework versus no homework | 6 | .60 | 23 |
| Note: This figure describes the eight major research syntheses on the effects of homework published from 1983 to 2006 that provide the basis for the analysis in this article. The Cooper (1989a) study included more than 100 empirical research reports, and the Cooper, Robinson, and Patall (2006) study included about 50 empirical research reports. Figure 1 reports only those results from experimental/control comparisons for these two studies. | | | | |
| 1 Reported in Fraser, Walberg, Welch, & Hattie, 1987. | | | | |
| 2 Reported in Kavale, 1988. | | | | |

In the chart above, Zimmerman presents data from some of the most respected researchers and educators in the field. It is difficult to look at the data and argue that homework has no positive effect on student academic achievement. But if homework has some positive effect on student achievement, the question still remains: how much of an effect is it, and do the positives of homework outweigh the potential negatives?

According to Bennett and Kalish, authors of (2006). *The Case Against Homework,* there is almost no evidence that homework helps students of any age. However, the authors argue that homework is having a huge negative impact on America's families. Some of the numerous negative consequences include lack of sleep for children, play time, and most interestingly, time taken away for exercise. The authors suggest that a hidden cause of the homework burden is partly to blame for childhood obesity. The authors also critique the use of memorization and repetition especially when used for independent practice (Bennet & Kalish, 2006).

However studies show that even though Chinese students spend more homework time on math than American students, Chinese students do not have higher obesity rates than their American counterparts[[1]](#footnote-2). They do, however, have higher math scores, show more complex math abilities, and generally outperform their American peers in all math categories (Peng & Wright, 1993). Because Chinese math instruction is heavily rote, especially in early years, this research suggests that, at least for math, the development of rote skills increases the students ability to do math problems which are not rote (Siegler & Mu, 2008). Thus, the fervor against rote learning will need to be suspended if research continues to show that superior rote skills translate beyond the scope of just rote work.

In addition to its effect on academic achievement, homework provides students with opportunities to engage in a wide range of self-regulation processes beyond those listed above . A longitudinal study with fifth-grade students showed that doing homework fosters self-regulation skills and reading achievement as well as positive relationships between homework activities and self efficacy, responsibility for learning, and delay of gratification, self-regulation processes and self efficacy beliefs, goal setting, time management, managing the environment, and maintaining attention (Bembenutty, 2010).

Not everyone in education is convinced though, but with little to no data to support the opposing claims, it’s difficult to buy into the argument. Kohn does addresses the non-academic benefits of homework such as helping students develop study skills and time management skills. However, he argues that it is impossible to know whether homework can develop these skills or does develop such skills and that as far as research in this area is concerned, "no one has a clue (Kohn, 2006, p. 52)."

Phase 1 Implementation

The intervention for phase 1 was a specific style of homework that was designed with the following aspects in mind: 1. To be straightforward and clear so that there would be no confusion as to what was expected of the student. This resulted from a large number of students reporting that the number one reason that they don't do homework is because they don't understand it; 2. To be familiar and simple enough for the student to complete on their own without any help from parents and/or other adult assistance. The reason for this was that in the literature review, multiple works showed that parent involvement in homework completion often resulted in negative consequences for student learning and family relationships; 3. To be purposeful and meaningful. Research from the literature review suggested that students were more likely to complete their homework if they knew the explicit purpose or why they were doing the work. Often this was referred to as "deliberate practice." This homework was modeled after California standardized test questions since the students were going to take the CSTs the following week and the homework reflected the preparation for this test; 4. To be completed in a reasonable amount of time. Harris Cooper suggests that a good thumbnail for how much time students should spend on homework is about 10 min. multiplied by the grade level. So for an eighth grader, homework should be around 80 min. a night. Accordingly, my homework was designed to take around 10 min. to complete so that students who complete work at a slower pace would still be able to complete the work in the neighborhood of 13 to 14 min. which would be the amount of time they would have for one class if they were assigned homework for all six classes.

Phase I Results and Analysis

The percentage of late work for phase 1 was considerably lower than the class average for the year. The class was at 43% late work rate for the year compared to 26% late work for this week.

Homework Completion Log

**Analysis of Data**

I attribute the high homework on time rate to two factors: The homework was multiple choice just like the CST tests they were taking that week. They knew that what was on the homework was going to be on the CST. Thus there was an explicit purpose for doing the homework. My students also reported having less homework during this week since math CSTs were happening that week and every student I’ve asked says that they spend more time doing math homework than any other subject.

Another important reason students mentioned was that this homework did not take long, they did not think it was going to take long. The last factor was that it was easy. The homework consisted of ten multiple choice questions which. They did not have to read a book, write any sentences, just circle a letter.

Three students did not complete a single sheet for the week totaling 12 sheets or nearly 2/3 of the uncompleted homework.

**Exit Slips**

Students did alright on the exit slips. They struggled with the higher level question at the end of each slip.

Phase I: Results

I used my own observation journal, exit slips, a completion log, and interviews to analyze the effects of Phase 1. Phase 1 was the implementation multiple choice worksheets for students to complete. The results showed that students responded well in their attitudes towards this style of homework. Students also scored well on their exit slips. Completion percentage for homework for this stage was also above average for the year. Students understood the homework. Lastly, two interviews with students also revealed positive attitudes, associations, and performance, to a degree, with worksheets. Overall, multiple worksheets showed positive attitudes and academic results for this 8th grade class.

In my observation journal, I noted that students found this work to be easy to understand. When going around the classroom during the week, I asked students if they had any trouble understanding their homework. There were 4 instances that I marked in my journal during the week where students told me they did not understand the homework. This is in contrast to the needs assessment where the number one reason students gave for not completing homework was that they did not understand it. For two of the instances I marked, students did not understand the wording of the question.

This is an excerpt from the homework that shows students misunderstanding of the question.

6. What were some lasting impacts of Roman civilization on the Western world and how are they seen in the world today?

Overall, comprehension of the tasks for the week was much greater than usual.

Student attitudes were positive towards this homework. In my casual questioning of the students as I walked around during the week, I often asked them how what they thought of the homework. The comments were generally positive.

Observation Journal **Notes**

April 10: walking around classroom I see many students who have completed the CST practice homework but a lot of them, about half of them, are filled with errors. It's interesting to note that since these questions could have easily been looked up on their laptops. I wonder if the students simply guessed at answers and did not look up the answers.

Phase 2 Implementation

Homework completion rates were much higher for phase 1. However, it was obvious to me in discussing the material with them in class that they did not understand the material. To be fair, we were basically cramming for a test that covered 7th and 8th grade so the material wasn’t even from this year. Still, the exit slips were telling in that overall the class did alright on the multiple choice, but when it came to the short answer analysis/evaluation style questions at the end of each one, the class was struggling.

They homework completion was up for many of the wrong reasons. I wanted to see if we could get the same homework completion but with deeper understanding and more student investment in the material. With that in mind, I decided to make student choice be the next stage phase. I told my students they would get to vote for what their homework would be that week. The class was very excited. After laying out some ground rules, mainly that it actually had to be work that I could see and evaluate, we took a vote. The students voted on filling out a map with all the major battles of the civil war on it, as well as the names of the states, naval battles, and other important events. I gave them a blank map. They didn’t have to use it if they wanted to make the map from scratch.

**Phase 2 Results**

I was shocked with the results from phase 2. I told my students that very thing. The data speaks for itself.

Notes on Data

* Fairly disastrous
* Difficulty coming to a consensus vote
* The task that won seemed to be selected primarily because it seemed easy (fill in a map)
* On-time and completion percentage extremely low.
* Quality of work also low
* Student investment in it low
* Exit slip scores below average

Phase 3

For phase 3 I knew we needed to get back on track. The student choice phase had been a disaster, more so because I had such high expectations for it. I decided that students at that age don’t really know what’s good for them. I would have a better chance designing something they would think is interesting than they would. Even though they would never admit that, they basically just proved it to me. I decided to go with homework projects that would get students using their higher level thinking skills. I wanted to see some creation. So we did letters to the supreme court to voice our opinions regarding the Dred Scott decision.

Phase 4

I carried out additional phases after the first three. I was giving homework anyway and it’s my job to monitor its effectiveness whether I’m doing a research project or not. The only interesting phase out of the next two was the week I gave no homework.

I had been advised to stay at two phases and that three was absolutely the limit for the action research. So I stopped keeping detailed data logs and stopped with exit slips, but I did still keep notes and I still had copies of most of the student work.

The negative effects that concern me as a teacher are children's frustration and exhaustion; lack of time for other activities, and possible loss of interest in learning. Homework can also strains the relationship between parents and children as the parent has to be an enforcer or risk being criticized for not being involved enough in their child's education.

Alfie Kohn says that there is no evidence of any academic benefit from assigning homework in elementary or middle school. He says that he discovered this after sifting through a lot of research to prepare for a book on the topic. He stresses that this lack of academic achievement for students relating to homework is even more pronounced for elementary school. He does admit to a week, however tenuous, relationship between homework and academic achievement for high school. However, he states that, "the correlation is weak and tends to disappear when more sophisticated statistical measures are applied." He also argues that no study has ever shown that homework builds character or teaches good study habits.

Alfie Kohn argues that more homework is being assigned to students despite the absence of evidence for its effectiveness. It intrudes on family time. He argues that homework is assigned even when it does not seem appropriate or important but rather because the children have to do something during the week after school just because.

The author states that he has heard from countless parents across the country about the problems associated with homework. The parents have said that homework has cons that overwhelmingly outweigh the pros. He proposes that teachers may assign homework for fear that if their child comes home with non-pay are not doing anything at school and that they may look like a bad teacher.

Alfie Kohn's argument is that homework is the conventional wisdom and that's it. He questions some traditional, and possibly clichéd, ideas about homework such as homework is a link between school and family or that it reinforces what is taught in class which he argues is a repetition of road behavior rather than a development of understanding, or that it teaches children self-discipline for which he says there is no evidence.

He quotes education professor Harvey Daniels as saying, "most of what homework is doing is driving kids away from learning." Kohn points out that most students dread homework and see it as something to be gotten through. Thus, he argues, even if homework did have benefits they would have to be weighed against students love of learning. The ADA here seems to be that if students don't like to do something then we should figure out how for them not to do it. This thinking is not preparing children for their future. To argue that students should not have to do homework because they dislike it is like saying that athletes should not go to practice and just playing the games. Not everything that is worth doing is fun and in many cases, things that are worth the most doing are often times the least fun. Whether or not children find homework

Conclusion

Homework is a very complicated matter. As the LA and Davis examples showed, there seems to be more confusion than certainty when it comes to homework. Problems arising from different socioeconomic issues to simply not enough research or conflicting research on the subject makes it difficult to come up with easy answers. Vocal and influential critics such as Alfie Kohn are advocating for extreme change in this area.

When drafting a homework policy, it is clear to this researcher that brain theory which drives successful utilization of learning should be prominent. Even theory such as operant condition which some theorists such as Kohn might disagree with, needs to be included. Just as importantly, the community needs to have a voice in such an important educational policy. There needs to be more research done in the field as well. Also, students need to be included in the homework process and the use of technology in homework needs to be addressed and utilized.

Finally, since we as secondary teachers, especially at the high school level should be trying to prepare our students for college level courses, it seems most beneficial for more schools to model their homework policy, and more generally, their policy of work outside the classroom towards that of a university setting.

1. Statistics taken from <http://www.nationmaster.com/graph/hea_obe-health-obesity> [↑](#footnote-ref-2)